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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,625	12/05/2001	Michael F. Laub	17711 (MHM 13238US01)	8238

7590 03/07/2003

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EXAMINER
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TA, THO DAC

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 03/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant(s)

10/005,625

Applicant(s)

LAUB ET AL.

Examiner

Tho D. Ta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 and 41-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-25 and 41-43 is/are rejected.
- 7) ☒ Claim(s) 6 and 26-29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/4/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other:

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of claims 1-29 and 41-43 in Paper No. 5 is acknowledged.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 11-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11, it is unclear if a coaxial cable recited on lines 5 and 7 are new coaxial cables or a repeat of the coaxial cable recited on line 2.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5, 7-11, 14, 16-25, 41-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamaguchi (5,975,950).

In regard to claim 1, Yamaguchi discloses a cable connector for interconnecting coaxial cables W having center and outer conductors W1, W3, comprising:

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first and second insulated housings 7, 7' matable with one another and configured to receive coaxial cables W, the first and second insulated housings 7, 7' including first and second cavities 9a, respectively; first and second center contacts 3, 3' configured to securely attach to center conductors W1 of coaxial cables W, the first and second center contacts 3, 3' being inserted into the first and second cavities 9a, respectively, at least one of the first and second center contacts 3, 3' having a planar body section (the tab portion 5', the side walls of 5); and first and second outer ground contacts 16, 16' configured to securely attach to outer conductors W3 of coaxial cables W, the first and second outer ground contacts 16, 16' each having at least one planar wall (side walls of 18 and 18') secured to a respective first and second insulated housing 7, 7', the planar walls (side walls of 18 and 18') of the first and second outer ground contacts 16, 16' being positioned on opposite sides and parallel to the planar body section (the tab portion 5', the side walls of 5).

In regard to claim 2, Yamaguchi discloses that the first and second insulated housings 7, 7' include flat peripheral walls (side walls of 9, 9') formed in a rectangular shape, the planar walls (side walls of 18 and 18') of the first and second outer ground contacts 16, 16' abutting against a respective one of the flat peripheral walls (side walls of 9, 9').

In regard to claim 3, Yamaguchi discloses that each of the first and second outer ground contacts 16, 16' includes walls 19a, 19b formed together in a rectangular

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U-shape, the walls 19a, 19b, 20 being inserted along opposite sides of the first and second insulated housings 7, 7'.

In regard to claim 5, Yamaguchi discloses that the second center contact 3' constitutes a blade contact having the planar body section, the blade contact defining a contact plane located between, and arranged parallel to, the planar walls (side walls of 18').

In regard to claim 7, Yamaguchi discloses that the first and second outer ground contacts 16, 16' and at least one of the first and second center contacts 3, 3' are mounted to the first and second insulated housings 7, 7' layered in parallel planes in a strip line geometry (see fig. 1).

In regard to claim 8, Yamaguchi discloses that each of the first and second outer ground contacts 16, 16' include a first planar wall arranged parallel to the first center contact 3 and a second planar wall arranged parallel to the second center contact 3' (see fig. 1).

In regard to claim 9, Yamaguchi discloses that the first and second insulated housings 7, 7' form a dielectric layer spacing the first and second center contacts 3, 3' from the first and second outer ground contacts 16, 16' by a predetermined distance (see fig. 1).

In regard to claim 10, Yamaguchi discloses that the first and second center 3, 3' and outer ground contacts 16, 16' generate an electric field concentrated proximate, and along an axis extending perpendicular to, the planar walls (side walls of 16, 16', see fig. 1).

In regard to claim 11, Yamaguchi discloses a coaxial cable connector comprising: a connector housing 7 configured to receive a coaxial cable W having inner and outer conductors W1, W3; a pair of ground contacts 16, 16', each contact 16, 16' configured to be connectable to an outer conductor W3 of a coaxial cable W; and a center contact 3 configured to be connectable to an inner conductor W1 of a coaxial cable W, the connector housing 7 maintaining the center contact 3 and the pair of ground contacts 16, 16' in parallel planes, the center contact 3 positioned between the pair of ground contacts 16, 16' in a strip line geometry (contact portion of 5 is between 16 and 16' and spaced by housing 7, see fig. 1).

In regard to claim 14, Yamaguchi discloses that the pair of ground contacts 16, 16' constitute opposed planar walls located on opposite sides of the center contact 3 (see fig. 1 at the mating area).

In regard to claim 16, Yamaguchi discloses that the pair of ground contacts 16, 16' comprise opposed planar walls (two of the side walls from the four side walls 18) arranged perpendicular to the parallel planes.

In regard to claim 17, Yamaguchi discloses that the pair of ground contacts 16, 16' include first and second ground shell walls positioned in the parallel planes on opposite sides of the center contact 3, and third and fourth ground shell walls positioned along side edges of the center contact 3 (see fig. 1).

In regard to claim 18, Yamaguchi discloses that the center contact 3 and pair of ground contacts 16, 16' generate an electric field having a magnitude focused in regions extending in a direction transverse to the parallel planes.

In regard to claim 19, Yamaguchi discloses that the pair of ground contacts 16, 16' and center contact form a flux density distribution having primary concentration areas proximate opposite sides of the center contact and secondary concentration areas proximate opposite lateral edges of the center contact (due to the four side walls of 16' cover the four side walls of 16 in the mating area in fig. 1).

In regard to claims 20, 41, Yamaguchi discloses a coaxial cable connector, comprising: a housing 7 having opposite ends configured to be connectable to a pair of coaxial cables W; a center contact 3 having a planar body (side wall of contact portion

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5), the center contact 3 being configured to be connected to conductors W1 in the pair of coaxial cables W; and ground contacts 16, 16' configured to be connected to ground conductors W3 in the pair of coaxial cables W, the ground and center contacts 16, 16', 3 being retained by the housing 7 and being arranged parallel to one another (see fig. 1).

In regard to claim 21, Yamaguchi discloses that ground contacts 16, 16' have planar bodies (four side walls of each ground contact) located on opposite sides of the planar body (side walls of contact portion 5) of the center contact 3, the planar bodies (four side walls of each ground contact) of the ground contacts 16, 16' being arranged parallel to the planar body (side walls of contact portion 5) of the center contact 3.

In regard to claims 22-24, 41-43, Yamaguchi discloses that the pair of coaxial cables W form circumferentially symmetric electric field distributions proximate opposite ends of the housing 7 and the center and ground contacts 3, 16, 16' form an asymmetric electric field distribution about the housing 7, the asymmetric electric field distribution having flux density focused in major areas extending outward from opposite sides of the planar body (contact portion of 3 is between 16 and 16' and spaced by housing 7, see fig. 1).

In regard to claim 25, Yamaguchi discloses that the ground contacts 16, 16' include body sections arranged parallel to the planar body (side walls of contact portion



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5) of the center contact 3 and include side walls (two of the four side walls of each ground contact) arranged perpendicular to the planar body of the center contact 3.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Schumacher (3,828,298).

In regard to claim 4, Yamaguchi does not disclose that at least one coaxial cable displacement contact connected to at least one of the first and second outer ground contacts 16, 16', the coaxial cable displacement contact having displacement beams configured to pierce and electrically engage an outer conductor W3 of a coaxial cable W.

Schumacher discloses a displacement contact connected to a contact 20, the displacement contact having displacement beams 38 configured to pierce and electrically engage an outer conductor 16 of a coaxial cable 10 in order to provide good mechanical and electrical contacts (see abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamaguchi invention by constructing the portion 19a having displacement beams as taught by Schumacher in order to provide good mechanical and electrical contacts.

***Allowabl Subj ct Matt r***

8. Claims 6, 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 12, 13, 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to provide, teach or suggest the first and second center contacts both constitute blade contacts having the planar body sections, the blade contacts mating with one another and arranged in perpendicular contact planes; the connector housing includes a slot for receiving the center contact; the housing including flat exterior surfaces for receiving the pair of ground contacts, the slot and flat exterior surfaces being formed parallel to one another, the connector housing forming a dielectric layer separating the center and the pair of ground contacts by a predetermined distance; the pair of ground contacts include U-shaped rectangular shells joining one another to surround the center contact; the center contact constitutes a blade contact arranged in one of the parallel planes; and in combination with other limitations in the corresponding base claims.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho D. Ta whose telephone number is (703) 308-0800. The examiner can normally be reached on M-F (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



**THO D. TA  
PRIMARY EXAMINER**

tdt  
March 5, 2003